

The logo for ntgrate, featuring the word "ntgrate" in a bold, lowercase, sans-serif font, followed by a registered trademark symbol (®). The background is dark gray with a white geometric pattern of intersecting lines forming a diamond shape.

ntgrate[®]

Solutions for sustainable buildings - BREEAM



Shaping a sustainable future.

Increased existence of green building rating systems, the rise of net-zero buildings, and a sharper focus on existing structures are among the trends that will drive sustainability through 2020.

As ntgrate is supporting the green recovery of our planet, we work hard on obtaining all leading green certificates.

We are proud that ntgrate is one of the first Belgian flooring brands that can respond to and aid you with BREEAM and LEED certification.

Using ntgrate flooring solutions no less than 14 BREEAM credits can be achieved.

The feasibility to obtain these credits were analysed and confirmed by an independent and qualified expert engineering company, Encon, specialized in optimising energy consumption.

Let's integrate.

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BREEAM®

Say what?

— *Deliver and validate the sustainability value of your project.*

BREEAM (British Research Establishment Environmental Assessment Method) is a **certification system that recognises sustainable buildings** that exceed national standards. As a quality label, it encourages the market to focus on sustainability in building design as well as the environmental impact of products in buildings.

Clients choose BREEAM certification because it helps them deliver and validate **the sustainability value of their assets cost effectively** and to an internationally recognised and robust standard, tried and tested since it was first launched in 1990.

In doing so BREEAM helps clients manage and mitigate risk through demonstrating sustainability performance during planning, design, construction, operation or refurbishment, helping to lower running costs, maximise returns through market value and attract and retain tenants with desirable places to live and work.

Supporting the green recovery.



BREEAM®

Say how?

— *How does it work?*

As **BREEAM** assesses the overall building concept, this label specifies **10 main categories**, with multiple issues, on which the building is evaluated. Credits are awarded and weighted for each category in order to generate the final score for the building, in levels from pass to outstanding. The maximum amount of credits available can differ slightly depending on building type.

As ntgrate, we develop durable woven vinyl flooring products that increase the architectural value of buildings and enhance people's living and working environment. Integration of ntgrate flooring (tiles, rolls and klic) in buildings can contribute to the overall sustainability level of the building, thus achieving credits for building certificates such as BREEAM.

Increase the architectural value of your project.

Categories.

 Energy ENE 1→9 max. 35 credits	 Health and wellbeing HEA 1→9 max. 13 credits	 Innovation INN 1 max. 10 credits	 Land use & ecology LE 1→5 max. 10 credits	 Materials MAT 1→5 max. 11 credits	 Management MAN 1→5 max. 21 credits
 Pollution POL 1→5 max. 13 credits	 Transport TRA 1→5 max. 13 credits	 Waste WST 1→6 max. 8 credits	 Water WAT 1→4 max. 9 credits		



BREEAM®

The award goes to.

— *How to get a BREEAM rating.*

On the basis of different criteria, classified in 10 categories (see previous pages), the sustainability of a building is evaluated objectively. For each of these criteria it is being **verified to what extent a building scores better** than legal instructions and the standard market performances.

When a target or benchmark is reached, as determined by the BREEAM assessor, the development or asset score points, called **credits**. The category score is then calculated according to the number of credits achieved and its category weighting. Once the development has been fully assessed, the **final performance rating** is determined by the sum of the weighted category scores

On this basis the building obtains eventually a classification ranging from 'Pass, Good, Very good, Excellent to Outstanding'.

Compare a building objectively with other buildings.

★	Pass	≥ 30
★	Good	≥ 45
★	Very good	≥ 55
★	Excellent	≥ 70
★	Outstanding	≥ 85



BREEAM®




ntgrate credits

— Overview

Using ntgrate woven vinyl flooring, up to 14 credits can be gained on the following categories/ issues (according to BREEAM International New Construction 2016:

Category	Issue	Max. credits	tiles ⌘	rolls ⌘	klic ⌘
Health & wellbeing (HEA)	HEA2 - Indoor air quality	max. 5	2		2
	HEA4 - Thermal comfort	max. 3	1		1
	HEA5 - Acoustic performance	max. 2	1		1
Management (MAN)	MAN2 - Life cycle cost and service life planning	max. 4	1		1
	MAN4 - Commissioning and handover	max. 4	1		1
Energy (ENE)	ENE1 - Reduction of energy use and carbon	max. 15	1		1
Materials (MAT)	MAT1 - Life cycle impacts	max. 6	3		3
	MAT5 - Designing for durability and resilience	max. 1	1		1
Waste (WST)	WST1 - Construction waste management	max. 4	1		1
	WST4 - Speculative finishes	max. 1	1		1
	WST6 - Functional adaptability	max. 1	1		1
Total			14		14



			HEA2 max. 5
2	2	2	

Indoor air quality

— *Health & wellbeing - HEA2*

AIM

To recognise & encourage healthy internal environment through the specification & installation of appropriate ventilation, equipment and finishes.

Assessment criteria

- Emissions from building products (1 credit)
- Indoor air quality measurement (1 credit)
Measurement by external party in the building.




Ntgrate solutions

- Credits earned by minimising VOC's.
- The analysis results are based on certified lab research. The extensive analyses show that the floors of ntgrate have a low emission of VOCs. Comparing the lab results with the BREEAM standard shows that these ntgrate products fit perfectly within this BREEAM issue, Hea 02. Choosing for one of these floors contributes to achieve healthy indoor air environments.

Remarks:

- Emissions from building products = Low levels of VOC from the specified flooring
- Indoor air quality measurement = Low levels of VOC from the specified flooring



			HEA4 max. 3
1	1	1	

Thermal comfort.

— *Health & wellbeing - HEA4*

AIM

To ensure that appropriate thermal comfort levels are achieved through design, and controls are selected to maintain a thermally comfortable environment for occupants within the building.

Assessment criteria

- Thermal modelling (1 credit)
Analysis of thermal comfort level using Predicted Mean Vote (PMV) & Predicted Percentage of Dissatisfied (PPD).
Thermal comfort levels in accordance with European Standard EN ISO 7730:2005.
- Thermal modelling demonstrates that the relevant requirements are achieved for a projected climate change environment.




Ntgrate solutions

- Underfloor heating will bring extra comfort to any place, using NTGRATE floor. All NTGRATE floors have R-values that combine well with underfloor heating.

Soft Tess



Fair Miguel

			HEA5 max.
1	1	1	2

Acoustic performance.

— *Health & wellbeing - HEA5*

AIM

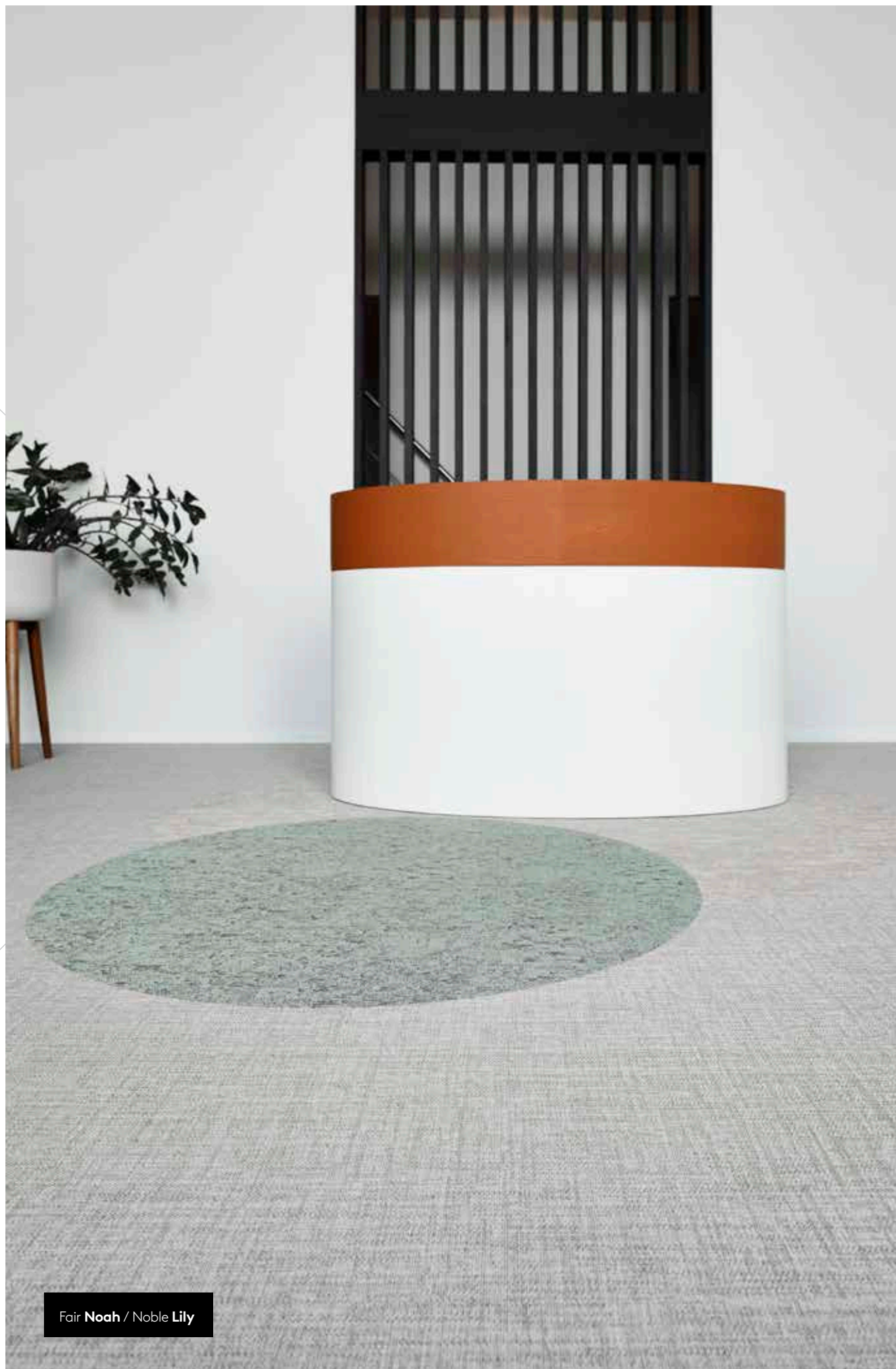
To ensure the acoustic performance of the building meets the appropriate standards for its purpose.

Assessment criteria

- Sufficiently low internal noise levels
- Adequate sound insulation between rooms
- Demonstrate that the reverberation time or equivalent absorption area for relevant spaces complies with targets
- Noise study by qualified acoustician required

Ntgrate solutions

- NTGRATE floors will for example support the end user with impact sound reduction.



Life cycle cost and service life planning.

— *Management - MAN2*

AIM




To deliver whole life value by encouraging the use of life cycle costing to improve design, specification, through-life maintenance and operation, and through the dissemination of capital cost reporting to promote economic sustainability.

Assessment criteria

- Component level LCC options appraisal
 - A component level LCC options appraisal has been developed in line with ISO 15686-5:2008
 - Demonstrate how the component level LCC options appraisal has been used to influence building and systems design, and specification to minimise life cycle costs and maximise critical value

Ntgrate solutions

- The cost of the floor throughout its life cycle can be determined through a LCC (Life Cycle Cost analysis). For this purpose, NTGRATE can provide information regarding installation, maintenance, replacement, etc.

			MAN2 max.
1	1	1	4



Commissioning and handover.

— *Management - MAN4*

AIM

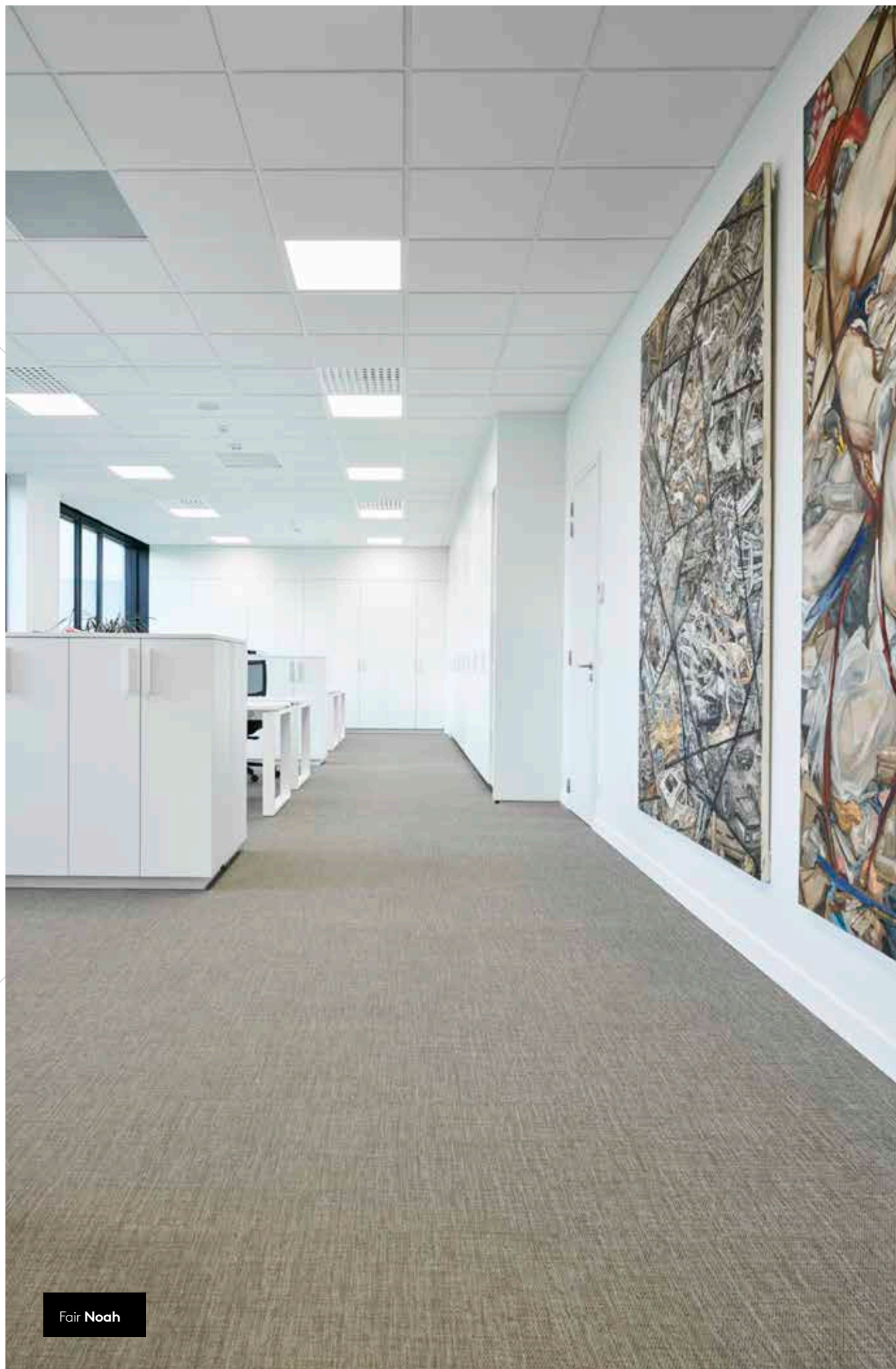
To encourage a properly planned handover and commissioning process that reflects the needs of the building occupants.

Assessment criteria




- Handover
 - A building or home user guide is developed
 - A training schedule is prepared for building occupiers
 - The design intent of the building
 - The available aftercare team
 - Introduction to, and demonstration of, installed systems
 - Introduction to the building user guide
 - Maintenance requirements, including any maintenance contracts and regimes in place

Ntgrate solutions

- NTGRATE can provide all the required test reports, installation advices and maintenance instructions. This will help a BREEAM project team to create a clear building manual.



Reduction of energy use and carbon.

			ENE1 max. 15
1	1	1	

— Energy - ENEI

More than 40% of the energy used within the European Union goes towards heating, cooling, lighting and managing the buildings in which we live and work. This figure must be reduced by at least 60% before 2050 in order to meet current global climate change targets. Our declared intent and philosophy is to continue innovating towards a greener planet and the objective of zero-energy building across Europe.

AIM

To recognise and encourage buildings that minimise their operational energy consumption through good design.

Assessment criteria

2 options available:

- **Option 1 (max. 15 credits):**
Use of approved building energy calculation software
 - Percentage improvement over notional building compliant with local regulations or ASHRAE Standard.
 - Defining the building energy performance using building energy calculation software.
 - Assessed building compared to notional equivalent
 - Notional building = local regulations or ASHRAE Standard (if local regulations are less rigorous)
 - Energy modelling study & qualified engineer required
- **Option 2 (max. 10 credits):**
Energy efficient design features
 - Using BREEAM Checklist A5
Implementation of energy efficient design features (requirements) listed in checklist A5
 - Defining the building energy performance using Checklist A5: Energy Efficient Design Features
 - Covers issues as U-values, lighting efficiency, renewable technologies

Remark:




- Less credits achievable for this ENEI option
- Option 1 must be used where available

Ntgrate solutions

- Flooring has a limited impact on the energy use within buildings, depending on its thermal conductivity. The Technical Specification (on the NTGRATE website) gives details about thermal conductivity and resistance of all materials.



Sharp Blanca

			MAT1 max.
3	3	3	6

Life cycle impacts.

— *Materials - MAT1*

AIM

To recognise & encourage the use of robust appropriate life cycle assessment tools & specification of materials with low environmental impact over full building life cycle.

Assessment criteria

- Measuring the life cycle environmental impact of building elements: building fabric, services & landscaping
- Evaluating a range of material options for the building with a Life Cycle Assessment (LCA) tool BREEAM MAT1 Calculator required (5 credits)
- EPD - Environmental product declarations (1 credit)

Integrate solutions

- NTGRATE has conducted a Life Cycle Assessment (LCA). The aim is double: we reduce the environmental impact of our products and additionally help building contractors or project leaders in reducing their building's environmental impact.
- The outcome of the LCA assessment is an Environmental Profile Declaration (EPD) for the entire life cycle of a product: from extraction to processing, manufacturing, installation and maintenance, up to its end-of-life treatment. The EPD addresses all the environmental key issues: climate change, ozone depletion, acidification, consumption of minerals and water, air and water pollution and the amount of waste.



Designing for durability and resilience.

— *Materials* - MAT5

AIM




To recognise and encourage adequate protection of exposed elements of the building and landscape, therefore minimising the frequency of replacement and maximising materials optimization

Assessment criteria

- Protecting vulnerable parts of the building from damage
- Suitable durability and protection measures to prevent damage to vulnerable parts of the internal and external building and landscaping elements
- Protecting exposed parts of the building from material degradation

Ntgrate solutions

- NTGRATE products stand out in durability. Reports demonstrate wear resistance, proving that our products comply with European standards. Our flooring solutions protect vulnerable parts of a building.

			MAT5 max.
1	1	1	1



Construction waste management.

— *Waste - WST1*

AIM

To promote resource efficiency via the effective and appropriate management of construction waste.

Assessment criteria




- Diversion of resources from landfill

Ntgrate solutions

- To promote circularity, NTGRATE supports initiatives to collect and recycle on the construction site.



Fair Sienna

			WST4 max.
1	1	1	1

Speculative finishes.

— Waste - WST4

AIM

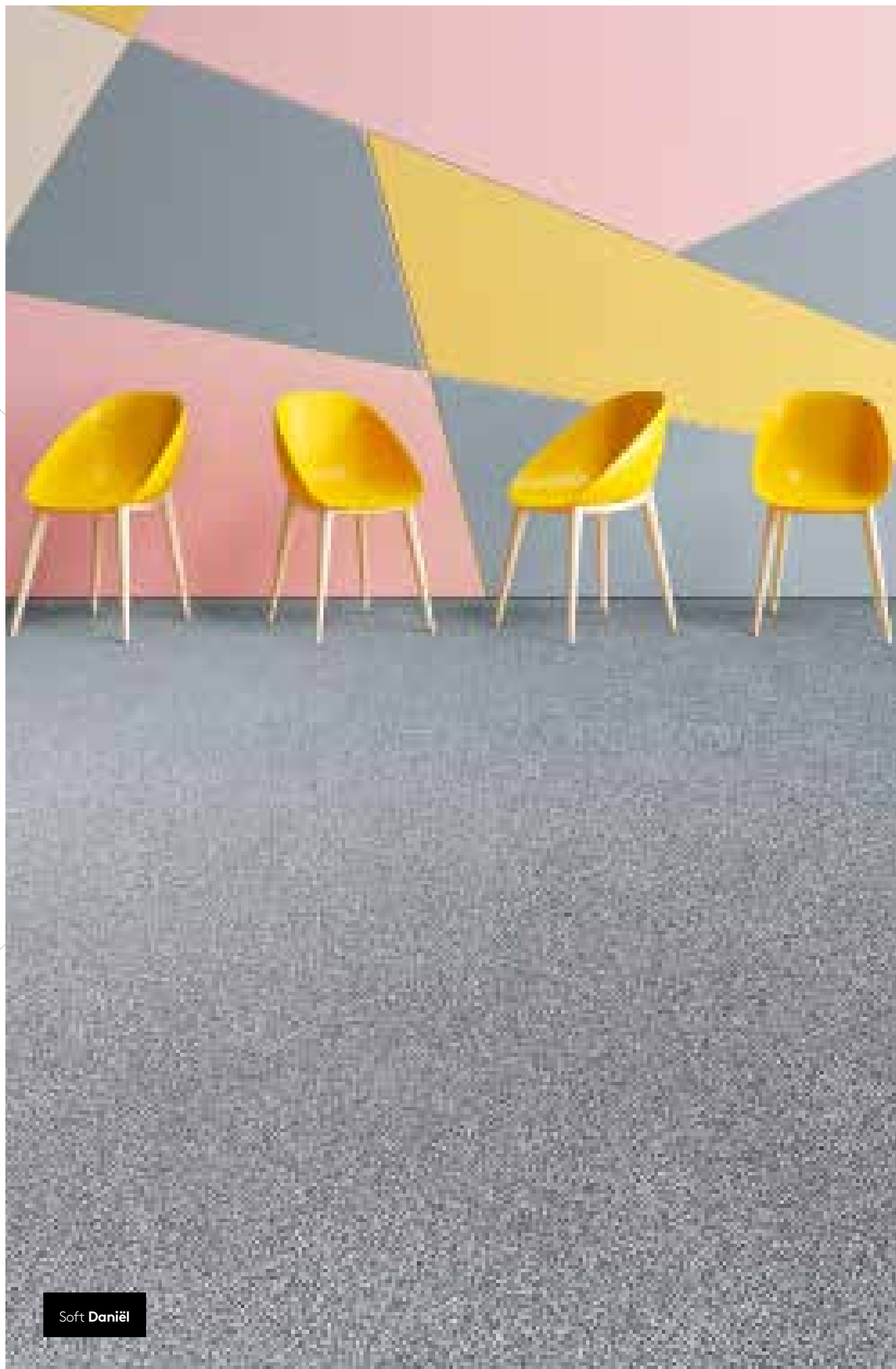
To encourage the specification and fitting of finishes selected by the building occupant and therefore avoid unnecessary waste of materials.

Assessment criteria

- For tenanted office areas prior to full fit-out works, carpets, other floor finishes and ceiling finishes have been installed in a show area only
- In an office building developed for a specific occupant, that occupant has selected the specified floor and ceiling finishes
- For multiple dwellings (where the future occupant is not known), floor, kitchen and bathroom finishes have been installed in a show area only
- In a residential building, future occupants have selected at least three of the specified floor, kitchen and bathroom finishes

Ntgrate solutions

- It's always the building's user or tenant who has the final word about the floor finish. NTGRATE, as the supplier of floors, is your partner to advise you in gaining this BREEAM credit.



Soft **Daniël**

			WST6 max.
1	1	1	1

Functional adaptability.

— *Waste - WST6*

AIM

To recognise and encourage measures taken to accommodate future changes of use of the building over its lifespan.

Assessment criteria

- Functional adaptability:
 - A building-specific functional adaptation strategy study
 - Functional adaptation measures have been implemented in the design

Ntgrate solutions

- NTGRATE designs floorings and flooring systems which allow for multiple usage during its lifetime. All these floorings score high in functional adaptability.

ntgrate.

The key to a sustainable building.

ntgrate can help you in achieving BREEAM credits. Using ntgrate flooring products, no less than 14 BREEAM credits can be achieved. The feasibility to obtain these credits was analysed and confirmed by an independent and qualified expert engineering company, ENCON, specialized in **optimising energy consumption**.

To help you achieve these credits, **ntgrate specialists can assist you** in selecting the most appropriate solutions for your project and **provide you with the necessary documents**, required for the BREEAM assessment. This will include the general documents and certificates, but also project specific information to increase your BREEAM score.

ntgrate®

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